REMARKS

Claim 1 has been amended by incorporation of limitations from claims 3 and 4 and claims 3 and 4 have been amended accordingly. Likewise, claim 2 has been amended by incorporation of limitations from claims 8 and 9 and claims 8 and 9 have been amended accordingly.

Responsive to paragraphs 1-7 of the office action, applicants, by their undersigned attorney, hereby state for the record that the "Substitute Specification" filed June 16, 2008 contains no new matter. Accordingly, entry of the "Substitute Specification" is again respectfully requested.

Claims 3 and 8 have been amended responsive to paragraph 8 of the office action.

The rejection of claims 1, 3-7, 13, 15, 17 and 18 for obviousness over Toshima et al in view of Uchida et al is respectfully traversed. The invention as claimed here is, at least in part, a smooth surface of a novel structure on either the prism sheet (claim 1) or light diffusing film (claim 2) in a light control sheet comprising the prism sheet and the light control film. The novel surface structure within the light control sheet is that of a comb polymer. The Examiner applies Toshima et al for its disclosure of the basic combination of a light diffusing film and a prism sheet and acknowledges that Toshima lacks suggestion of applicants' novel polymeric surface structure within a light control sheet:

> "The only feature missing from the light diffusing element as provided by Toshima et al is that they do not explicitly disclose that the smooth surface of the prism sheet comprises a comb polymer has [sic., having] a stem moiety and a branch moiety wherein the main component constituting the stem moiety is different from that constituting the branch moiety." [page 5, office action]

Later at page 5 of the office action, the Examiner relies upon Uchida et al, paragraphs [0024]-[0033] and [0035], particularly paragraph [0032] for suggestion of use of "a combination of polymer materials .... for the purpose of increasing the smoothness of the flat/smooth surface of the diffusing element or the prism sheet." The Examiner apparently regards the "combination of polymer materials" disclosed by Uchida et al as somehow suggestive of a comb polymer, but does not explain

how or why. For this reason alone, the Examiner has not stated a *prima facie* case for obviousness.

At pages 9-10 of the office action, the Examiner gives three reasons (a, b and c) why he disagrees with applicants' previous arguments regarding the alleged obviousness of claims 1, 3-7, 13, 15, 17 and 18.

Regarding "a", the initial burden is on the Examiner to explain how the references suggest the limitations of each of the claims. This the Examiner has not done. He simply asserts that applicants have not shown the contrary. What the Examiner characterized as the "only feature" was found partly in claim 1 and partly in claim 3. Other dependent claims have not been treated at all.

Further with regard to "a", the term "comb polymer" has an art-recognized meaning and, in and of itself, distinguishes the novel surface structure from that of the resin combinations disclosed by Uchida et al. As established by the excerpts from the IUPAC Compendium of Chemical Terminology (attached), a "comb polymer" is defined as "A polymer composed of comb macromolecules." "Comb macromolecule", in turn, is defined as "A macromolecule comprising a main chain with multiple trifunctional branch points from each of which a linear side-chain emanates." In [0033] of their specification, applicants characterize the "comb polymer as having branch moieties graft-polymerized to the stem", a characterization which paraphrases the IUPAC definition. In other words, a comb polymer is composed of macromolecules, each of which is a single molecule having a structure including a "main chain" (stem moiety) and multiple side-chains (branch moieties). That unitary molecular structure ("comb macromolecule") is self-evidently far different from "a plurality of resins" (Uchida al [0024]-[0030]) and from "a first resin and a second resin in combination" (Uchida et al [0032]). The comb polymer is a single macromolecule whereas "a first resin and a second resin in combination" is a physical admixture of different polymers.

Regarding (b), the Examiner argues that "limitations from the specification are not read into the claims. As noted above, "comb polymer" has an art-recognized meaning, in and of itself, which defines a polymeric structure unlike anything suggested by Uchida et al and, therefore, there is no need to read further limitations from the specification into the claims in order to distinguish the prior art. The

Examiner also writes "A bare statement without any positively supported written evidence is not sufficient to overcome a rejection." Again, the initial burden to establish a *prima facie* case is on the Examiner. Nevertheless, applicants have now provided "written evidence" in the form of the IUPAC excerpts.

Reason "c" is stated by the Examiner as follows:

> "In particular, in paragraph [0032], Uchida et al disclose that the resins used to form the diffusing layers are made by a first resin material in the form of styrene resin and a second resin material in the form of acrylic resin. The combinations of the first and second resins of the diffusing layer constitutes a comb polymer in the diffusing layer." [emphasis added].

Applicants acknowledge that the combination of a styrene resin and an acrylic resin is one of a plethora of possible combinations which might be derived from the teachings of Uchida et al. However, the underlined portion of the quote, in particular, is factually erroneous - inconsistent with the art-recognized meaning of the term "comb polymer."

"d" is a bare assertion that various dependent claims are somehow met by teachings of various paragraphs of the references without any explanation. For example, the Examiner asserts that "present claims 3-5 are disclosed in paragraph [0032]." Claim 4 defined the comb polymer as having (1) a stem moiety consisting of acrylic monomers and (2) a branch moiety of (2a) "monoethylenycally unsaturated groups as polymerizable functional end groups and (2b) a backbone component of macromonomers of mainly non-acrylic type monomers as the main component. Even allowing for the error of equating a mixture of two resins with a single resin molecule (comb polymer), where the Examiner would find the other limitations of claim 4 in [0032] of Uchida et al is a complete mystery. Even the vague correlation between paragraphs of the references and the various claims now offered by the Examiner was absent from the first office action.

Claim 1 as amended further distinguishes the combined prior art teachings insofar as it has been amended to define the structure of the comb polymer as "having a copolymer stem moiety and a branch moiety formed of macromolecules."

The rejection of 2, 8-12, 14, 16, 19 and 20 for obviousness over Toshima et al in view of Uchida et al is likewise traversed. This rejection differs from that of the

other claims in that the Examiner acknowledges two distinctions from Toshima et al:

> "There two things missing from the light diffusing element as provided by Toshima et al as follow: First they do not explicitly disclose that the smooth surface of the prism sheet comprises a comb polymer has a stem moiety and a branch moiety wherein the main component constituting the stem moiety is different from that constituting the branch moiety; and Second, they do not disclose that the diffusing element has a smooth surface and the prism sheet has a roughened surface as claimed."

For the first distinction, i.e. "a comb polymer has a stem moiety and a branch moiety wherein the main component constituting the stem moiety is different from that constituting the branch moiety", the Examiner again relies on the teachings of paragraphs [0024]-[0033] and [0035] of Uchida. As explained above Uchida et al neither disclose nor suggest any comb polymer whatsoever, much less a comb polymer of the nature defined by amended claim 2. That explanation need not be repeated here.

Regarding the second distinction the Examiner writes:

> "Regarding to the second feature missing from the device provided by Toshima et al, it is noted that such a structure of the light diffusing element and the prism sheet as claimed is merely that of a preferred embodiment and no criticality has been disclosed. .... Thus, absent and showing of criticality, it would have been obvious to one skilled in the art ...."

The, "second feature" is *prima facie* obvious because it "is merely that of a preferred embodiment"? It should suffice to note here that the Examiner's reasoning is totally unsupportable legal error. The Examiner's suggestion that the burden is on the applicants to establish patentability by a showing of criticality of the claimed embodiment over the other disclosed embodiments represents two additional legal errors. Firstly it is legal error because it treats certain embodiments disclosed by applicants as prior art, which they are not. Secondly, it has the burden of proof (or burden of going forward) backwards. While a *prima facie* case for obviousness might be rebutted by evidence of criticality relative to the art, absence of such evidence does not create *prima facie* obviousness.

The Examiner's arguments a, b, c and e at pages 11-13 of the office action are the same as arguments stated in the previously discussed rejection for

obviousness, which have been answered above. Argument d at pages 12 and 13, i.e. that claim 2 is *prima facie* obvious because it "is merely that of a preferred embodiment" is also answered above.

In conclusion, it is respectfully requested that the rejections of record be reconsidered and withdrawn in view of the present amendments and foregoing comments.

Respectfully submitted,
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comb macromolecule

A *macromolecule* comprising a *main chain* with multiple trifunctional *branch points* from each of which a linear *side-chain* emanates.

Notes:

1. If the subchains between the branch points of the main chain and the terminal subchains of the main chain are identical with respect to constitution and degree of polymerization, and the side chains are identical with respect to constitution and *degree of polymerization*, the macromolecule is termed a *regular comb macromolecule.*
2. If at least some of the branch points are of functionality greater than three, the macromolecule may be termed a *brush macromolecule.*

1996, *68*, 2296

comb polymer
A polymer composed of *comb macromolecules.*
See also *regular polymer.*
1996, *68*, 2304